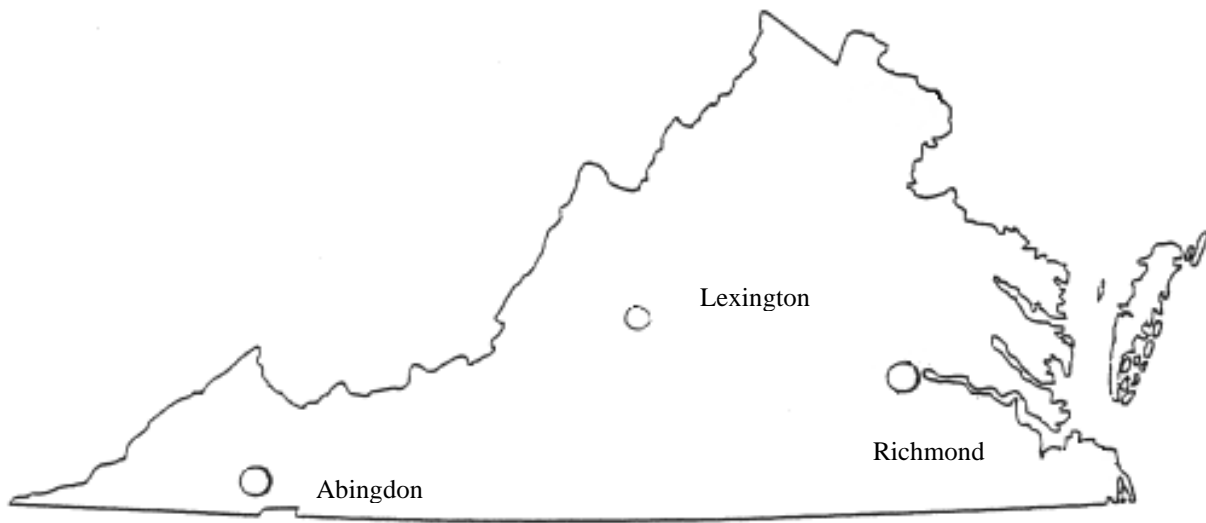


**PROCEDURAL GUIDELINES
For
DRINKING WATER FUNDING
RECIPIENTS**



Virginia Department of Health

Office of Drinking Water



DATE: June 2, 2008

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General Overview

Introduction

To ensure compliance with program policies and requirements, VDH offers assistance to Recipients from the time of application to project completion. The Program Guidance Packages included in these Procedural Guidelines are intended as the first step of this assistance by providing the following information:

Policies and procedures regarding eligible expenses and the flow of monies.

Loan and construction management requirements and recommended methodologies for complying with these requirements.

VDH activities related to assistance and program oversight throughout the project.

This general overview provides a summary of the activities involved in the planning, design, and construction of a project including program requirements and recommendations for the successful completion of a project are discussed. Individual Program Guidance Packages will be referenced for additional details on specific topics.

Project Management

Managing a successful waterworks construction project is a major undertaking. For many Recipients, the project will be one of the largest (if not the largest) in which they have been involved. Good project planning and management is essential and will likely result in a successful construction project.

A key to good project management is to designate a project manager to represent the Recipient in all loan and project-related activities. This person should be an employee of the Recipient, available to deal with project matters, and given the necessary authority to oversee and coordinate all project activities. The project manager leads the project management "team" that provides the administrative, technical, financial, and legal support for the project.

The size and structure of the project management team will depend on the size and complexity of the project, but the required functions are the same whether the project is small or large. These functions include:

Administration - Planning; application completion; organization; scheduling; record keeping; filing; procurement; change order processing; claims management; overall coordination and management.

Technical - Preparation of engineering documents; cost estimating; construction inspection and oversight; change order review; project start-up and O&M training; overall technical support.

Financial - Identifying and arranging financing; budgeting; accounting and reporting; cash flow projection; processing receipts and disbursements; disbursement request preparation.

Legal - Contract development, review and interpretation; procurement review; negotiation; advice on land, easement, permit, and license and title acquisition; bond counsel; litigation; overall legal support.

The Recipient should either have or acquire qualified staff to carry out these support functions. The administrative functions are typically carried out by the project manager, although the Recipient may elect to delegate some duties to other employees. The technical functions are performed by the consulting engineering firm hired by the Recipient, and this selection is extremely important to the success of the project. Financial functions may be partially assumed by the project manager, with certain financing and accounting duties carried out by other staff or contracted out to a professional accountant. Legal functions are normally carried out by a designated attorney on the staff of or retained by the Recipient.

These procedural guidelines provide a number of Program Guidance Packages (PG's) relating to project management. Essential elements in the management of a funded project include an understanding of what costs are eligible under the program and how the project's cash flow will be handled. *Eligibility of Expenses* (PG #1) and *Funding Disbursement and Loan Repayment* (PG #2) discuss these two topics. A *Financial Management System* for accountability of monies is discussed in PG #3. *Procurement* (PG #4) provides information regarding how goods and services involved in the project must be obtained in order to comply with program requirements and State law. *Filing and Record Keeping* (PG #6) discusses the objectives and recommended organization of those systems.

Planning and Design

The planning phase of the project is extremely important because its goal is to set forth the most cost-effective, environmentally sound, and implementable project for the Recipient. Planning documents are reviewed and approved before the project moves into the design stage as outlined in PG #8.

The documents assess the current situation, projects future needs, develops alternatives, assesses the environmental impact of the alternatives (for those projects not categorically excluded) along with the monetary costs, and presents a selected plan. These documents are normally prepared by the consulting engineering firm hired by the Recipient. To be eligible for funding, please note that procurement of professional engineering services must be in accordance with the Virginia Public Procurement Act (PG #4).

The design phase of the project, which involves the development of plans and specifications for the facilities to be constructed, is the next step. The Commonwealth of Virginia *Waterworks Regulations* detail the State standards which must be met in the design. Close contact with the field offices of VDH is helpful in reducing delays at this stage. A Preliminary Engineering Conference is strongly recommended prior to full scale design, particularly for complex or large projects. In addition to the *Waterworks Regulations* requirements, the specifications must include the specific Contract Inserts, and the Minority Business Enterprise/Women's Business Enterprise (MBE/WBE) goals, as discussed in PG #4.

Upon completion, the plans and specifications must be submitted to VDH for review, comment, and final approval. Processing of the plans and specifications will proceed as outlined in the *Waterworks Regulations* and as further described in PG #8, with ultimate issuance of a Construction Permit.

Construction

Upon issuance of the Construction Permit, and receipt of approval from the VDH Funding Staff, the Recipient may proceed to advertise for bids for construction. The procurement requirements called for in the Virginia Public Procurement Act must be followed in procuring construction contracts (see PG #4). A pre-bid conference is recommended so that the engineer can present the

project to bidders and answer any questions they may have. It is also recommended that the Recipient select and begin discussions with their bond counsel at this time. Prior to the award of the contract, the Recipient must submit to VDH evidence of bid advertising, the bid tabulations, bid selection documentation, the bid bond, the low bid proposal, and adequate documentation of MBE/WBE solicitation/intended utilization. At this time, the final project budget should be finalized and presented to VDH. Following satisfaction of all closing and program requirements, loan closing can occur.

Prior to construction, the project manager should plan and implement record keeping, filing (PG #6), and financial management systems (PG #3) for the project. The Recipient should also provide a disbursement schedule to VDH at this time. The project manager should ensure that all necessary permits have been obtained, that the contractor's bonding and insurance is in place, and that all necessary land and easements are secured. These and other topics should be discussed in the *Preconstruction Conference* (PG #9) which should be held after contract award and prior to the beginning of construction. At the time of the Preconstruction Conference, VDH staff will meet with the Recipient to discuss project construction as it relates to the funding.

During construction the Recipient must provide for full time project inspection. Inspections, carried out by staff of the Recipient's consulting engineering firm or hired directly by the Recipient, will keep the Recipient aware of construction progress, quality, and conformance with plans and specifications. Inspections are very valuable in claim resolution, change order negotiation and ensuring that payments are made for work-in- place. Inspections should be documented with reports that can be reviewed by VDH during on-site monitoring. The Recipient should also provide VDH with the MBE/WBE report on a quarterly basis. VDH will conduct on-site evaluations to assess project management and construction (*State Construction Oversight*-PG #10).

The Recipient should submit fully supported disbursement requests, certified by the consulting engineer, to VDH and make prompt payments to the construction contractor. The disbursement schedule should be updated to VDH as needed.

The Recipient should have an established and fully understood procedure to process change order requests from the contractor. The procedure should, at a minimum, involve submission of fully supported change order proposal from the contractor; an independent estimate of the change order costs from the consulting engineer; a negotiation of a fair and reasonable price and time extension, as appropriate; a formal agreement to the contract changes; and notification to VDH of the change orders. Change orders must be sent to the VDH for approval, as required by the *Waterworks Regulations*. They will also be reviewed for loan eligibility during the on-site evaluations by VDH.

Project Completion

As a final step before the construction contractor is released, the project manager should conduct a final walk through the facility with the consulting engineer, the contractor, and other key individuals to ensure that all work has been completed. Once the Recipient and engineer are satisfied with the project's completion, they should submit the Statement of Completion of Construction referenced in the *Waterworks Regulations* and request a final construction inspection by VDH (see PG #10).